VI. ABSTRACT

A process and composition is described that allows the operator to fix and preserve tissue culture grown cells such that their intracellular molecular detail is retained for up to four years. This enables increased reproducibility of staining for antigens and small molecule targets for use in the areas of basic research and diagnostic applications.

VII. CLAIMS

1. A method of preserving tissue culture cells on glass slides by fixing with glutaraldehyde or methanol, followed by using a preservative agent containing a buffer, a sugar and a carbohydrate polymer, followed by using a rapid freeze step, followed by lyophilization and storage under cool and desiccated conditions.
2. A method as described in Claim 1 that results in retention of nanometer scale molecular structure detail.
3. A method as described in Claim1 that results in a product that has a shelf life greater than four years at 4°C.
4. A method as described in Claim1 that produces a preparation of cells on a glass slide.
5. A method as described in Claim1 which is suitable for Swiss 3T3 cells.
6. A method as described in Claim 1 which is suitable for HT1080 cells.
7. A method as described in Claim 1 which is suitable for HeLa cells.
8. A method as described in Claim1 which is suitable for MCF-7 cells.
9. A method as described in Claim 1 which is suitable for other cell lines.
10. A method as described in Claim 1 which is suitable for mitotic cell preparations.
11. A method as described in Claim 1 which is suitable for apoptotic cell preparations.
12. A method as described in Claim 1 which is suitable for growth factor treated cells.
13. A method as described in Claim 1 which is suitable for lysophosphatidic acid treated cells.
14. A method as described in Claim 1 which is suitable for platelet derived growth factor treated cells.
15. A method as described in Claim 1 which is suitable for tumor necrosis factor alpha treated cells.

16. A method as described in Claim 1 which is suitable for serum starved cells.

17. A method as described in Claim 1 which is suitable for probing of focal adhesion plaques.

18. A method using rhodamine fibronectin as a rapid stain for focal adhesion plaques.

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